REMARKS

The applicant respectfully submits that no new matter has been added. It is believed that this Response is fully responsive to the Office Action dated January 17, 2007.

At the outset, the applicant again thanks the Examiner for indicating that claims 2 - 6 contain allowable subject and would be allowable if re-written in the manner suggested in item 4, page 3 of the outstanding Action. The applicant respectfully submits however that, for the reasons more fully discussed below, to amend the claims in the manner suggested by the Examiner would unnecessarily narrow or limit the scope of the claims to which the applicant regards as his invention.

Claims 1 and 7 are rejected under 35 U.S.C. §103(a) based on Furukawa (U.S. Patent No. 5,684,771) in view of Nakajima (EP 1187111 A2). The applicant respectfully requests reconsideration of this rejection.

The Examiner has taken the position that Furukawa teaches autocorrelation. With all due respect to the Examiner, the part in Furukawa cited by the Examiner merely teaches a processing based on phase difference between focus sum signal and push-pull signal, which is by no means the same as a:

mathematical tool used frequently in signal processing for analysing functions or series of values, such as time domain signals. Informally, it is a measure of how well a signal matches a time-shifted version of itself, as a function of the amount of time shift. More precisely, it is the cross-correlation of a signal with itself. Autocorrelation is useful for finding repeating patterns in a signal, such as determining the presence of a periodic signal which has been buried under noise, or identifying the missing fundamental frequency in a signal implied by its harmonic frequencies. (See, http://en.wikipedia.org/wiki/autocorrelation). The autocorrelation is used in the present invention for the purpose of identifying frequency signal in the above noise (see Figs. 3-5, P.11, L.4-), which is totally different from mere calculation of the relationship between the focus sum signal and the push-pull signal as in the cited reference.

On the other hand, the autocorrelation is used in the applicant's invention for the purpose of identifying frequency signal in the above noise (see, the applicant's Figures 3 - 5, and lines 4, *et seq.*, page 11 of the applicant's specification), which is completely different from the mere calculation of the relationship between the focus sum signal and the push-pull signal as taught in the in the cited reference.

In view of the above, the suggested combination of references would still far short in fully meeting the applicant's claimed invention. Thus, a person of ordinary skill in the art would not have found the applicant's claimed invention obvious under 35 U.S.C. §103(a) based on Furukawa and Nakajima, singly or in combination.

Accordingly, the withdrawal of the outstanding obviousness rejection under 35 U.S.C. §103(a) based on Furukawa (U.S. Patent No. 5,684,771) in view of Nakajima (EP 1187111 A2) is in order, and is therefore respectfully solicited.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicant's undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper to Deposit Account No. 01-2340.

Respectfully submitted,

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